

A New Genus and Three New Species of Phytoseiid
Mites from Mexico with Collection Records
on *Phytoseius plumifer* (C. & F.) and
P. macropilis (Banks)

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Phytoseiids are mostly predaceous mites preying chiefly on plant feeding mites. The family is represented in Mexico by a rather large number of species some of which are widespread and common.

The genus *Phytoseius* includes two species, the rediscovered *plumifer* (C. & F.) (Chant, 1957) and the ubiquitous *macropilis* (Banks). Recently the writer collected *plumifer* on the east coast of Mexico and on Key Largo, Florida. A third species, more common and with a broader distribution than *plumifer* in Mexico, is described below.

Chant (*l. c.*) erected the genus *Proprioiseius* for two undescribed species from the eastern United States; a third species is added to the group in this paper.

All measurements are in microns and are averages unless the variation from the average is more than ten percent; if so, the range is given.

Phytoseius nahuatlensis, n. sp. (Figures 3-4)

P. nahuatlensis resembles *P. plumifer* (C. & F.) as redescribed and figured by Chant (*l. c.*) in general facies, but differs from it chiefly by having a large pore behind M1 and by having shorter lateral setae.

FEMALE: Dorsal shield 260 long, 131 wide, with faint imbrications along the anterolateral margins, faint rugosities anteromedially, and with 16 pairs of setae as follows: Eight laterals (including S1 which is on the shield and close to L4), two medians, and six dorsals. The lengths of these setae follow: L1 36, L2 12, L3 31-40, L4 13-18, L5 46, L6 57-69, L7 42-61; M1 9, M2 31-44; D1 20, D2-D6 9-14; all setae except M1 and D2-D6 and apparently L2 pectinate. S1 30 and VL1 38-48

long, both pectinate. Sternal shield with three pairs of setae; ventrianal shield strongly constricted laterally and with three pairs of preanal setae. Fixed digit with three teeth just proximal of terminal hook, movable digit with one tooth. Genu, tibia and metatarsus of leg IV each with a slender, tapering macroseta about 18, 18, and 20 long respectively, the tips not or scarcely enlarged.

MALE: Resembles female; dorsal shield 206 long, about 118 wide.

Holotype: Female, Tuxtla Gutierrez, Chiapas, January 15, 1957 (D. De Leon), from *Lonchocarpus rugosus*. *Paratypes*: One male, same locality as for holotype, but from *Rhus schideana*; one female, Veracruz, Ver., December 25, 1956, from *Guazuma tomentosa*; three females, Tuxtla Gutierrez, January 12, 1957, from an unknown host. Additional specimens were collected from the latter locality on *Pluchea odorata*; from Cordoba, Ver., February 4 and 5, 1957, from *Heliocarpus tomentosa* and *Luceha candida* and from Santa Maria del Oro, Nay., March 24, 1957, from an unknown host.

Specimens which closely resemble the above species, but are larger (dorsal shield 266-288 long), with most of the lateral setae longer (L1 38, L2 10, L3 46, L4 9, L5 60, L6 72-90, L7 58-72; M2 49-60), and with the macrosetae of leg IV somewhat longer, coarser and with the tips distinctly enlarged were collected at Ixtlan del Rio, Nay., March 24, from an unknown host; at Tepic, Nay., from *Lippia umbellata*; Mirador del Aguila (near Tepic), from *Guazuma tomentosa*; and at San Blas, Nay., April 4, from *Thevetia* sp. In addition three specimens collected on the east coast of Mexico in December 1956 from *Guazuma* sp. and *Hamelia patens* have very long lateral setae as follows: L1 47, L2 10, L3 60, L4 12, L5 78, L6 90-102, L7 74-81; M2 68. The macrosetae of leg IV of these last three mentioned specimens are large, coarse and with strongly expanded tips. Further work is necessary to determine whether three species are involved or whether all these specimens are variations of a single plastic species.

Phytoseius plumifer (C. & F.)

Collection records for this species follow :

Reynosa, Tam., December 18, 1956, from *Cordia boissieri* and *Melochia tomentosa*. Ciudad Victoria, Tam., December 20, 1956, from an unknown host. Tamazunchale, S. L. P., December 21, 1956, from *Eriobotrya japonica*. Veracruz, Ver., December 25, 1956, from *Guazuma tomentosa*. Tuxtla Gutierrez, Chiapas, January 15, 1957, from *Cecropia peltata*, *Achras zapota*, and *Morus alba*. Key Largo, Florida, USA, June 1956 from *Callicarpa americana*.

Phytoseius macropilis (Banks)

Collection records for this species in Mexico follow :

Minatitlan, Ver., January 8, 1957, from an unknown host. Ocozocoatla, Chiapas, January 28, 1957, from sangre toro.

Proprioseius mirandai, n. sp. (Figures 1-2)

P. mirandai is readily distinguished from the two other species in the genus (*P. meridionalis* Chant and *P. clancyi* Chant) by having L4, L7, and M2 much longer and more slender than they are in the latter two species.

FEMALE: Body whitish, elongate; dorsal shield rugose, 277 long, 148 wide, with 14 pairs of setae as follow: Seven laterals, two medians, and five dorsals (D5 missing). Dorsal shield setae of the following lengths: L1-L3 14-18, L4 81, L5 13, L6 20, L7 111; M1 5, M2 94 (L4, L7, and M2 strongly pectinate); D1 27, D2-D6 7-11; S1 31 (pectinate), S2 18, VL1 71 (pectinate). Peritremata extending forward to D1. Sternal shield with three pairs of setae; ventrianal shield with three pairs of preanal setae, no pores, about 100 long and 55 wide with the sides constricted and surrounded by four pairs of interscutal setae, including VL1. Two pairs of metapodal shields, the primary one about 19 long; a pair of small circular shields between VL1. Fixed digit with five or six teeth, movable digit with one tooth. Metatarsus of leg IV with a rapidly tapering macroseta about 19 long.

MALE: Resembles female. Dorsal shield 210 long, 125 wide; L4 45, L7 50, and M2 47 long, all pectinate.

Holotype: Female, Tepic, Nay., March 25, 1957 (D. De Leon), from *Lippia umbellata*. *Paratypes*: One female, same data as for holotype; one male, San Blas, Nay., April 6, 1957, from agualama; one male and one female December 25, 1956, Veracruz, Ver., from *Guazuma tomentosa*; two females, Cordoba, Ver., from *Croton draco*. Additional specimens were collected from *Hamelia patens*, Cordoba; from a composite, Matias Romero, Oax., January 30, 1957; and from *Polygonum* sp., San Blas, Nay., March 31, 1957.

I am not certain that these mites are predaceous; they may be facultative predators, as two specimens on a composite appeared to be sucking sap from the leaf—no other mites were observed on the leaf.

The mite is named for Dr. Faustino Miranda of the Instituto de Biologia, Mexico, D. F., who kindly identified most of the host plants I collected on the east coast of Mexico and in Oaxaca.

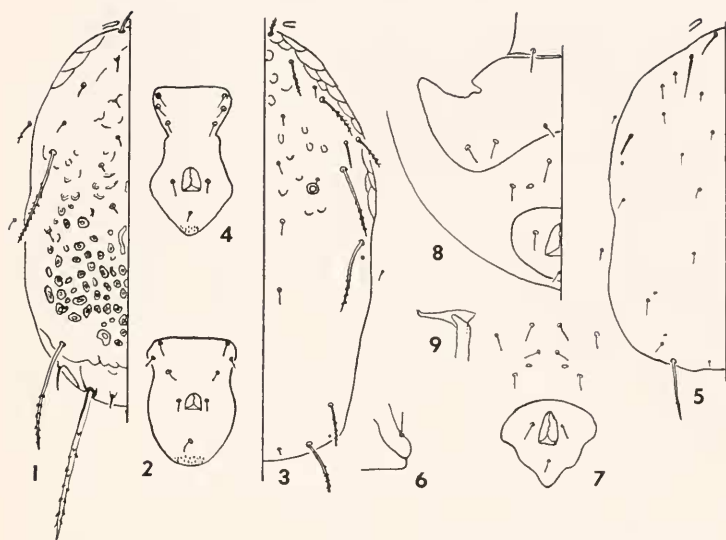
TYPHLOSEIOPSIS, n. gen.

Phytoseiids with dorsal shield smooth or nearly so, with at least five pairs of anterolateral setae, and with D2–D6 minute; female without ventrianal shield (only anal shield present), male with ventral shield separated from anal shield; genera I–IV, tibia IV, and metatarsus IV each with a macroseta. The absence of a ventrianal shield in the female and the separated ventral and anal shields in the male are distinguishing characters.

Type: *Typhloseiopsis theodoliticus*, n. sp.

Typhloseiopsis theodoliticus, n. sp. (Figures 5–9)

FEMALE: Body light tan; dorsal shield 308 long, 201 wide with 16 pairs of setae as follows: Eight lateral (L4 is distinctly medial of a line drawn between L3 and L5), two median, and six dorsal. Lengths of setae as follows: L1 33, L2–L4 7–9, L5 9–18 (10 ♀♀, 1 ♀ with L5 44), L6 9–13, L7 8, L8 56; M1 8, M2 12; D1 21–29, D2–D6 7–11; S1 14, S2 10; VL1 38.



Proprioscius mirandai, n. sp.: 1, dorsal shield; 2, ventrianal shield.

Phytoseius nahuatlensis, n. sp.: 3, dorsal shield; 4, ventrianal shield.

Typhloseiopsis thecodoliticus, n. sp.: 5, dorsal shield; 6, posterolateral margin of genital shield; 7, anal shield of female and the four pairs of preanal setae and the pair of pores of the ventrianal area; 8, ventral and anal shields of male; 9, distal end of spermatophore bearer.

Sternal shield longer than wide, very faintly reticulate and with three pairs of setae; ventral shield missing, not fused with anal shield; four pairs of preanal setae and a pair of small pores anterior of anal shield; anal shield 59 long, 63 wide with three setae and of shape shown in figure; three pairs of setae including VL1 surrounding ventrianal area; two pairs of small, narrowly oval metapodal shields. Legs slender, with macrosetae of the following lengths: Genu I 36, genu II 27-36, genu III 35, genu IV 54; tibia IV 27-36; metatarsus IV 43-63; all macrosetae slender and tapering to a fine point.

MALE: Resembles female, but L5 22 long and ventral shield present although not fused with anal shield; three pairs of setae on ventral shield and two pairs of setae and a pair of pores

between ventral and anal shields; anal shield 45 wide, 32 long of shape shown in figure. Dorsal shield 248 long, 163 wide.

Holotype: Female, San Blas, Nay., March 28, 1957 (D. De Leon), from *Paullinia fuscescens*. *Paratypes*: One male, three females, San Blas, Nay., March 31, 1957, from *Combretum farinosum*; two females, Cordoba, Ver., February 4, 1957, from *Miconia glaberrima*. Additional specimens were collected in the San Blas area from *Licaria* sp., *Annona* sp., banana, and a lauraceous tree, and at Tuxtla Gutierrez, Chiapas, from *Piper* sp.

These mites were found in association with species of *Brevipalpus* and *Tenuipalpus*.

Holotypes of the above species are in the writer's collection, paratypes will be deposited in the University of Florida Collections, Gainesville.

REFERENCE CITED

- CHANT, D. A. 1957. Descriptions of two new phytoseiid genera (Acarina: Phytoseiidae), with notes on *Phytoscius* Ribaga, 1902. *Canad. Ent.* 89 (8) : 357-363.